SUPPORTING STATEMENT FOR
PAPERWORK REDUCTION ACT SUBMISSIONS

Proposed Rule: Safety Standards for Underground Coal Mine Ventilation - Belt Entry Used as an Intake Air Course to Ventilate Working Sections And Areas Where Mechanized Mining Equipment Is Being Installed or Removed.

NOTE: In this package, the safe use of the belt entry as an intake air entry will be referred to as "belt air."

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and of each regulation mandating or authorizing the collection of information.

This proposed rule provides safety requirements for the use of the conveyor belt entry as a ventilation intake to course fresh air to working sections and areas where mechanized mining equipment is being installed or removed in mines with three or more entries. Currently, a mine operator must obtain a petition for modification under § 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) of existing section 75.350 (Air courses and belt haulage). This modification process is covered under OMB Clearance number 1219-0065 (expiration 10/31/03). Currently, 50 underground coal mines employing approximately 7,749 miners use belt air to ventilate working sections. In the Agency's evaluation of belt air petitions for modification, MSHA concluded that belt air can be safely used, provided that certain conditions are met. The petitioner requests the use of belt air to ventilate active working sections dependent upon the installation of an Atmospheric Monitoring System (AMS) with carbon monoxide sensors for early-warning fire detection in the belt entry. Typically, an AMS is composed of a central control station that includes a computer with data storage, software, a display, a printer, etc.; a communication network or telemetry system that includes signal conditioning equipment, multiplexers, drivers, repeaters, data line, etc.; and transducers or sensors that measure the value of a given physical parameter. This rule would be a voluntary standard. If the mine operators choose to use belt air to ventilate working places, the proposed revisions would maintain the level of safety in underground mines while allowing them to implement advances in mining atmospheric monitoring technology. This proposed rule would establish alternate requirements that mine operators would need to follow if they want to use belt air to ventilate working sections.

Numerous provisions would require action to modify the mine ventilation plan. Proposed paragraph 75.351(j) would require modification of the mine ventilation plan to include ambient CO levels and the means used to determine them. Proposed paragraph 75.351(m) would require that the mine ventilation plan be modified to show the use and length of time-delays of any non-fire related carbon monoxide sensor signals. Proposed paragraphs 75.371(ll), 75.371(mm), and 75.371(nn) would require modification of the mine ventilation plan to show the length of the time delay or any other method used for reducing the number of non-fire related alert and alarm signals from CO sensors, the lower alert and alarm setting for CO sensors, and the alternate instrument and the alert and alarm levels associated with the instrument, respectively. This proposed rule would also have an impact on existing paperwork requirements in 75.371(hh) on the ambient level in parts per million of carbon monoxide, and the method for determining the ambient level, in all areas where CO sensors are installed.

Proposed paragraph 75.351(b)(3) would require the posting at the surface location of an up-to-date map or schematic showing air flow directions and the location and type of all AMS sensors. (§ 75.1200 – OMB approval 1219-0073, as well, requires the mine operator to have an accurate and up-to-date map. No additional burden results as of 75.351(b)(3) and it is to be covered under 1219-0073.)

Proposed paragraph 75.351(n)(1) would require sensors used to detect CO or smoke be visually examined at least once each shift, when belts are operated as part of a production shift. If hazardous conditions are found during the visual exam, then a log of such conditions must be filed under existing § 75.363(b) - Hazardous conditions; posting, correcting and recording (OMB approval 1219-0088 – expiration 03/31/04). Proposed paragraphs 75.351(n)(2) and 75.351(n)(3) would require that a log be kept of every seven-day alarm test and every 31-day CO, smoke, or methane sensor calibration, respectively.

Proposed paragraph 75.351(o)(1)(i) would require that a record be made if the AMS emits an alert or alarm signal. The record would consist of the date, time, location, and type of sensor, and the reason for its activation. Proposed paragraph (o)(1)(ii) would require that, if a malfunction in the system occurs, a record be made of the malfunction and the corrective action to return the system to proper operating condition. We (MSHA) believe that such records would be useful to the miner, the mine operator, and the Agency in determining areas of recurring problems. This would aid in ensuring proper operation of AMSs.

Proposed paragraph (o)(1)(iii) would require that the persons doing the weekly test of alert and alarm signals, the monthly calibration, or maintenance of the system make a record of these tests, calibrations, or maintenance. Proposed paragraph § 75.351(o)(3) would require that all records concerning the AMS be kept in a book or electronically in a computer system, that would be secure and not susceptible to alteration. Proposed paragraph 75.351(p) would require the

mine operator to keep these records for at least one year at a surface location and to make them available for inspection by authorized representatives of the Secretary and representatives of miners.

Proposed paragraph 75.351(q) would require that a record of annual AMS operator training be kept. The record would include the content of training, the person conducting the training, and the date the training was conducted. The record would need to be maintained at the mine site by the mine operator for at least one year.

Proposed paragraphs 75.352(a) and 75.352(b) would require the designated AMS operator or other designated responsible person to take actions promptly when malfunction, alert, or alarm signals are received. These proposed requirements are parallel to those of proposed § 75.351(o).

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The respondents for the paperwork provisions of this proposed rule are mine operators that elect to use belt air to ventilate working sections and areas where mechanized equipment is being installed or removed. Currently, under OMB control number 1219-0065, these same operators have been required, under petition for modifications, to collect much of this information. The proposed rule would require operators to continue to collect this information. The records would be used by coal mine supervisors and employees, State mine inspectors, and Federal mine inspectors. The records show that the examinations and tests were conducted and give insight into the hazardous conditions that have been encountered and those that may be encountered. The records of inspections greatly assist those who use them in making decisions that will ultimately affect the safety and health of miners working in belt air mines.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

Mine operators may retain the records in whatever method they chose, which may include utilizing computer technology. The proposed rule does not specify how records must be kept. They could be kept in the traditional manner or stored electronically, provided they are secure and not susceptible to loss or alteration. MSHA encourages operators who store records electronically to provide a mechanism which would allow the continued storage and retrieval of

records in the year 2003 and beyond. MSHA currently accepts automatic printing of alert and alarm signals and automatic storage of some data in the computer archives. Under this proposed rule, we would require some hand written annotation on the computer printout to provide the additional information required. No other improved information technology has been identified that would reduce the burden.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose(s) described in 2 above.

MSHA knows of no other Federal or State reporting requirements that would duplicate the reporting requirements contained in this proposed rule. Although reference is made in this ICR to 1219-0065, Petition for Modification, it should be noted that there is no duplication.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

The Regulatory Flexibility Act (RFA) requires regulatory agencies to consider a rule's impact on small entities. Under the RFA, MSHA must use SBA's criterion for a small entity in determining a rule's economic impact unless, after consultation with SBA and an opportunity for public comment, MSHA establishes an alternative definition for a small mine and publishes that definition in the Federal Register. For the mining industry, SBA defines "small" as a mine with fewer than 500 employees. MSHA traditionally has considered small mines to be those with fewer than 20 employees. To ensure that the belt air proposed rule conforms with the RFA, MSHA has analyzed the impact of the rule on mines with 500 or fewer employees (as well as on those with fewer than 20 employees). MSHA has determined that the rule would not have a substantial economic impact on small mines, whether a small mine is defined as one with 500 or fewer miners or one with fewer than 20 miners.

The provisions of the Federal Mine Safety and Health Act of 1977 (Mine Act) and MSHA regulations and standards apply to all operations because accidents, injuries, and illnesses can occur at any mine regardless of size. Congress intended that the law be enforced at all mining operations regardless of size and that information collection and recordkeeping requirements be consistent with efficient and effective enforcement of the Mine Act. S. Rep. No. 181, 95th Cong., 1st Sess. 28 (1977). However, Congress did recognize that small operations may face problems in complying with some provisions of the Mine Act. Section 103(e) of the Mine Act directs the Secretary of Labor not to impose an unreasonable burden on small businesses in obtaining any information under

the Act. Accordingly, MSHA takes this into consideration when developing regulatory requirements, and when appropriate and consistent with ensuring the health and safety of this nation's miners, different requirements for small and large mines exist. See, for example, 30 CFR 49.3 and 50.11(b). To provide distinct information collection requirements for small mines in the regulation at hand, however, would not promote the objectives of the Mine Act.

In accordance with the RFA and its amendments at 5 U.S.C. 605(b), MSHA has determined that this proposed rule will not have a significant adverse economic impact on a substantial number of small entities. No small governmental jurisdictions or nonprofit organizations will be affected. Proposed collection of information is consistent with the guidelines in 5 CFR 1320.6.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Because of fire and explosion hazards in underground mines and the current petition for modification process (1219-0065), operators of belt air mines are already complying with these paperwork requirements. Further reduction of these requirements could result in increased hazards to miners. This is one way in which the health and safety of the mining industry's "most precious resource - the miner" is protected from such hazards. (See Section 2 of the 1977 Mine Act). If the proposed information collections discussed in Question 1 were not conducted, the consequences would be severe.

Further reduction of these requirements could result in increased hazards to miners. A reduction in the frequency of examinations and tests could allow unsafe conditions to develop, jeopardizing the safety of the miners. Section 101(a)(9) of the Mine Act prohibits any regulatory action that would reduce the protection afforded miners by an existing standard.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- **requiring respondents to report information to the agency more often than quarterly;** NA
- **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;** NA
- **requiring respondents to submit more than an original and two copies of any document;** NA
- **requiring respondents to retain records, other than health, medical, government contract, rant-in-aid, or tax records for more than three years;** NA
- **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of**

study; NA

- **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;** NA
- **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use;** NA **or**
- **requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.** NA

8. **If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

   Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

   Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

MSHA published the information collection requirements in the preamble of the Notice of Proposed Rulemaking on January 27, 2003. This Federal Register Notice notifies the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons 60 days to submit comments. Comments received will be addressed in the Preamble of the Final Rule and if necessary a revised ICR will be submitted. Additionally, MSHA cited several OMB numbers that it submitted to OMB for review in conjunction with this Proposed Rule; however, MSHA is only submitting one new information collection request that addresses the proposed paperwork requirements. MSHA will publish a correction notice in the Federal Register to correct this error.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA has decided not to provide payments or gifts to respondents identified by this collection.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

There is no assurance of confidentially provided to respondents. Records are maintained by the mine operator and reviewed by MSHA inspectors during routing inspections.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons form whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 13.**

The number of Respondents listed is the number of existing and new mines using "Belt Air" in the first year of the rule.

Respondents = 88

These calculations are based on the data from the Preliminary Regulatory Economic Analysis (PREA) from this Proposed Rule. In some cases; however, the totals in this Supporting Statement may appear to deviate from those in the PREA because the burden hour and burden hour cost components have been rounded for purposes of readability.

§ 75.351(j) Initial Justification of Non-Zero CO Ambient Levels of an AMS

Section 75.351(j) requires approval of the CO ambient levels, and the means to determine those levels, in the mine ventilation plan. Establishment of CO ambient levels (other than zero) would be associated with initial documentation that justifies those levels. The burden hours and costs of this initial documenting are shown in Table 1.

Only 50% of mines are expected to establish non-zero CO ambient levels (see PREA Table IV-33). MSHA estimates that 44 mines will be affected in the first year, and a total of 62 mines will be affected in the first three years.

Based on PREA Table IV-33, MSHA estimates 8 hours of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 92 burden hours and $5,046 in burden costs. Table 1 provides details of these calculations.

Table 1: Section 75.351(j).
Burden Hours and Costs of Initial Justification of Non-Zero Carbon-Monoxide
Ambient Levels to Reduce Non-Fire Alerts and Alarms
of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	5.9	8.0	46.99	$54.92	$2,580
20-99	15.8	8.0	126.08	$54.92	$6,924
100-500	20.7	8.0	165.98	$54.92	$9,116
Over 500	1.5	8.0	12.00	$54.92	$659
Total	43.9	N/A	351.05	N/A	$19,280
Second Year					
1-19	1.8	8.0	14.70	$54.92	$807
20-99	4.7	8.0	37.77	$54.92	$2,074
100-500	2.5	8.0	20.17	$54.92	$1,108
Over 500	0.1	8.0	1.11	$54.92	$61
Total	9.2	N/A	73.74	N/A	$4,050

	Third Year					
	1-19	1.8	8.0	14.70	$54.92	$807
	20-99	4.7	8.0	37.77	$54.92	$2,074
	100-500	2.5	8.0	20.17	$54.92	$1,108
	Over 500	0.1	8.0	1.11	$54.92	$61
	Total	9.2	N/A	73.74	N/A	$4,050
	Annualized Values[6]					
	1-19	2.1	8.0	16.81	$54.92	$923
	20-99	5.4	8.0	43.55	$54.92	$2,391
	100-500	3.7	8.0	29.71	$54.92	$1,632
	Over 500	0.2	8.0	1.82	$54.92	$100
	Total	11.5	N/A	91.88	N/A	$5,046

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-33, Column 6).
[2]PREA Table IV-33, Column 2.
[3](Column 2) x (Column 3).
[4]PREA Table IV-33, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(j) Implied Additional Costs for Existing § 75.371(hh) Initial Reporting of Non-Zero CO Ambient Levels of an AMS

Existing § 75.371(hh) requires reporting (as opposed to justification) within the mine ventilation plan of the "ambient level in parts per million of carbon monoxide, and the method for determining the ambient level, in all areas where carbon monoxide sensors are installed." This existing provision is impacted by proposed § 75.351(j). The burden hours and costs of this initial documenting are shown in Table 2.

Only 50% of mines are expected to establish non-zero CO ambient levels (see PREA Table IV-33). MSHA estimates that 44 mines will be affected in the first year, and a total of 62 mines will be affected in the first three years.

Based on PREA Table IV-33, MSHA estimates 0.25 hour of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 2.9 burden hours and $158 in burden costs. Table 2 provides details of these calculations.

Table 2: Impact of Section 75.351(j) on Existing Section 75.371(hh).
Burden Hours and Costs of Initial Reporting of Non-Zero Carbon-Monoxide
Ambient Levels to Reduce Non-Fire Alerts and Alarms
of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]

	First Year					
	1-19	5.9	0.25	1.47	$54.92	$81
	20-99	15.8	0.25	3.94	$54.92	$216
	100-500	20.7	0.25	5.19	$54.92	$285
	Over 500	1.5	0.25	0.38	$54.92	$21
	Total	43.9	N/A	10.97	N/A	$602
	Second Year					
	1-19	1.8	0.25	0.46	$54.92	$25
	20-99	4.7	0.25	1.18	$54.92	$65
	100-500	2.5	0.25	0.63	$54.92	$35
	Over 500	0.1	0.25	0.03	$54.92	$2
	Total	9.2	N/A	2.30	N/A	$127
	Third Year					
	1-19	1.8	0.25	0.46	$54.92	$25
	20-99	4.7	0.25	1.18	$54.92	$65
	100-500	2.5	0.25	0.63	$54.92	$35
	Over 500	0.1	0.25	0.03	$54.92	$2
	Total	9.2	N/A	2.30	N/A	$127
	Annualized Values[6]					
	1-19	2.1	0.25	0.53	$54.92	$29
	20-99	5.4	0.25	1.36	$54.92	$75
	100-500	3.7	0.25	0.93	$54.92	$51
	Over 500	0.2	0.25	0.06	$54.92	$3
	Total	11.5	N/A	2.87	N/A	$158

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-33, Column 6).
[2]PREA Table IV-33, Column 3.
[3](Column 2) x (Column 3).
[4]PREA Table IV-33, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(m) Initial Justification of Time Delay or Other Method Used with an AMS

Section 75.351(m) permits a mine to incorporate time delays into the AMS, or to use other methods for reducing non-fire alerts and alarm levels, provided they are specified and approved in the mine ventilation plan. Permission for such time delays, or other methods of reducing non-fire alerts and alarms, would be associated with initial documentation that justifies these changes. The burden hours and costs of this initial documenting are shown in Table 3.

MSHA expects that only 40% of diesel mines would use time delays, and no non-diesel mines would use time delays (see PREA Table IV-34). MSHA estimates that 16 mines will be affected in the first year, and a total of 21 mines will be affected in the first three years.

Based on PREA Table IV-34, MSHA estimates 8 hours of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 27 burden hours and $1,470 in burden costs. Table 3 provides details of these calculations.

Table 3: Section 75.351(m).
Burden Hours and Costs of Initial Justification of Time-Delay or Other Method to Reduce Non-Fire Alerts and Alarms of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	0.3	8.0	2.10	$54.92	$116
20-99	3.2	8.0	25.85	$54.92	$1,420
100-500	10.9	8.0	87.31	$54.92	$4,795
Over 500	1.2	8.0	9.60	$54.92	$527
Total	15.6	N/A	124.86	N/A	$6,857
Second Year					
1-19	0.1	8.0	0.66	$54.92	$36
20-99	1.0	8.0	7.74	$54.92	$425
100-500	1.3	8.0	10.61	$54.92	$583
Over 500	0.1	8.0	0.88	$54.92	$49
Total	2.5	N/A	19.90	N/A	$1,093
Third Year					
1-19	0.1	8.0	0.66	$54.92	$36
20-99	1.0	8.0	7.74	$54.92	$425
100-500	1.3	8.0	10.61	$54.92	$583
Over 500	0.1	8.0	0.88	$54.92	$49
Total	2.5	N/A	19.90	N/A	$1,093
Annualized Values[6]					
1-19	0.1	8.0	0.75	$54.92	$41
20-99	1.1	8.0	8.93	$54.92	$490
100-500	2.0	8.0	15.63	$54.92	$858
Over 500	0.2	8.0	1.45	$54.92	$80
Total	3.3	N/A	26.76	N/A	$1,470

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-34, Column 6) x (PREA Table IV-34, Column 7).
[2]PREA Table IV-34, Column 2.
[3](Column 2) x (Column 3).
[4]PREA Table IV-34, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(n)(1) Implied Additional Costs for Existing § 75.363(b), Recordkeeping for On-Shift Examination of an AMS

Section 75.351(n)(1) requires that the sensors and alarms of an AMS be visually examined at least once each shift. This is most conveniently done as part of the on-shift examination done under existing § 75.362(b). In the event a damaged sensor or alarm is visually observed, this would entail a recordkeeping requirement under existing § 75.363(b), which requires that "A record shall be made of any hazardous condition found." The burden for §75.363(b) is accounted for in currently approved OMB package 1219-0088 (expiration 03/31/04).

§ 75.351(n)(2) Weekly Testing of an AMS

Section 75.351(n)(2) requires weekly testing of the alarms for an AMS. This weekly testing is accompanied by a documentation requirement in § 75.351(o)(1)(iii). The burden hours and costs of this weekly testing are shown in Table 4.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-36, MSHA estimates between 13 and 52 hours of burden time per affected mine, depending on mine size. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 3,053 burden hours and $167,661 in burden costs. Table 4 provides details of these calculations.

Table 4: Section 75.351(n)(2).
Burden Hours and Costs for Weekly Testing
of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	13.00	152.71	$54.92	$8,387
20-99	31.5	26.00	819.54	$54.92	$45,009
100-500	41.5	39.00	1,618.29	$54.92	$88,877
Over 500	3.0	52.00	156.00	$54.92	$8,568
Total	87.8	N/A	2,746.54	N/A	$150,840
Second Year					
1-19	13.5	13.00	175.54	$54.92	$9,640
20-99	35.8	26.00	931.22	$54.92	$51,143
100-500	42.7	39.00	1,665.91	$54.92	$91,492
Over 500	3.0	52.00	156.00	$54.92	$8,568
Total	95.0	N/A	2,928.67	N/A	$160,842

	Third Year					
	1-19	15.0	13.00	194.64	$54.92	$10,690
	20-99	39.4	26.00	1,024.67	$54.92	$56,275
	100-500	43.8	39.00	1,709.14	$54.92	$93,866
	Over 500	3.0	52.00	156.00	$54.92	$8,568
	Total	101.2	N/A	3,084.45	N/A	$169,398
	Annualized Values[6]					
	1-19	14.7	13.00	190.73	$54.92	$10,475
	20-99	38.7	26.00	1,005.54	$54.92	$55,224
	100-500	43.6	39.00	1,700.55	$54.92	$93,394
	Over 500	3.0	52.00	156.00	$54.92	$8,568
	Total	99.9	N/A	3,052.82	N/A	$167,661

[1]Source: (PREA Table VII-3, Column 8).
[2](PREA Table IV-36, Column 4) x 52.
[3](Column 2) x (Column 3).
[4]PREA Table IV-36, Column 5.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(n)(3) Monthly Calibration of an AMS

Section 75.351(n)(3)(i) requires monthly calibration of the CO sensors for an AMS. This monthly calibration is accompanied by a documentation requirement in § 75.351(o)(1)(iii). The burden hours and costs of this monthly calibration are shown in Table 5.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-37, MSHA estimates between 15 and 300 hours of burden time per affected mine, depending on mine size. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 11,289 burden hours and $620,005 in burden costs. Table 5 provides details of these calculations.

Table 5: Section 75.351(n)(3).
Burden Hours and Costs for Monthly Calibration of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	15.00	176.20	$54.92	$9,677
20-99	31.5	60.00	1,891.24	$54.92	$103,867

	100-500	41.5	180.00	7,469.05	$54.92	$410,200
	Over 500	3.0	300.00	900.00	$54.92	$49,428
	Total	87.8	N/A	10,436.49	N/A	$573,172
	Second Year					
	1-19	13.5	15.00	202.54	$54.92	$11,124
	20-99	35.8	60.00	2,148.97	$54.92	$118,022
	100-500	42.7	180.00	7,688.81	$54.92	$422,269
	Over 500	3.0	300.00	900.00	$54.92	$49,428
	Total	95.0	N/A	10,940.33	N/A	$600,843
	Third Year					
	1-19	15.0	15.00	224.58	$54.92	$12,334
	20-99	39.4	60.00	2,364.63	$54.92	$129,866
	100-500	43.8	180.00	7,888.33	$54.92	$433,227
	Over 500	3.0	300.00	900.00	$54.92	$49,428
	Total	101.2	N/A	11,377.54	N/A	$624,855
	Annualized Values[6]					
	1-19	14.7	15.00	220.07	$54.92	$12,086
	20-99	38.7	60.00	2,320.48	$54.92	$127,441
	100-500	43.6	180.00	7,848.70	$54.92	$431,051
	Over 500	3.0	300.00	900.00	$54.92	$49,428
	Total	99.9	N/A	11,289.25	N/A	$620,005

[1]Source: (PREA Table VII-3, Column 8).
[2](PREA Table IV-37, Column 4) x 12.
[3](Column 2) x (Column 3).
[4]PREA Table IV-37, Column 5.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§§ 75.351(o)(1)(i) and (o)(1)(ii) Recordkeeping for Alerts, Alarms, and Malfunctions of an AMS

Section 75.351(o)(1)(i) requires a record of all alerts and alarms of an AMS. Section 75.351(o)(1)(ii) requires a record of all malfunctions of an AMS. The burden hours and costs of this recordkeeping are shown in Table 6.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-38, MSHA estimates between 0.66 and 45 hours of burden time per affected mine, depending on mine size. This time is priced at the miner's wage rate of $28.07 per hour. MSHA estimates annualized values of 1,185 burden hours and $33,266 in burden costs. Table 6 provides details of these calculations.

Table 6: Sections 75.351(o)(1)(i) & 75.351(o)(1)(ii).
Burden Hours and Costs of Recordkeeping for Alerts, Alarms, and Malfunctions of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	0.66	7.80	$28.07	$219
20-99	31.5	4.23	133.40	$28.07	$3,745
100-500	41.5	20.10	834.12	$28.07	$23,414
Over 500	3.0	45.05	135.15	$28.07	$3,794
Total	87.8	N/A	1,110.48	N/A	$31,171
Second Year					
1-19	13.5	0.66	8.97	$28.07	$252
20-99	35.8	4.23	151.58	$28.07	$4,255
100-500	42.7	20.10	858.66	$28.07	$24,103
Over 500	3.0	45.05	135.15	$28.07	$3,794
Total	95.0	N/A	1,154.36	N/A	$32,403
Third Year					
1-19	15.0	0.66	9.94	$28.07	$279
20-99	39.4	4.23	166.80	$28.07	$4,682
100-500	43.8	20.10	880.94	$28.07	$24,728
Over 500	3.0	45.05	135.15	$28.07	$3,794
Total	101.2	N/A	1,192.83	N/A	$33,483
Annualized Values[6]					
1-19	14.7	0.66	9.74	$28.07	$273
20-99	38.7	4.23	163.68	$28.07	$4,595
100-500	43.6	20.10	876.52	$28.07	$24,604
Over 500	3.0	45.05	135.15	$28.07	$3,794
Total	99.9	N/A	1,185.09	N/A	$33,266

[1]Source: (PREA Table VII-3, Column 8).
[2]PREA Table IV-38, Column 8.
[3](Column 2) x (Column 3).
[4]PREA Table IV-38, Column 9.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(o)(1)(iii) Recordkeeping for Testing, Calibration, and Maintenance of an AMS

Section 75.351(o)(1)(iii) requires a record of all testing, calibration, and malfunctions of an AMS. These three recordkeeping requirements are analyzed separately below.

Recordkeeping for Weekly Testing of an AMS

The burden hours and costs of the recordkeeping associated with the weekly testing of an AMS are shown in Table 7.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-39, MSHA estimates between 0.87 and 3.47 hours of burden time per affected mine, depending on mine size. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 204 burden hours and $11,117 in burden costs. Table 7 provides details of these calculations.

Table 7: Section 75.351(o)(1)(iii).
Burden Hours and Costs of Recordkeeping for Weekly Testing of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	0.87	10.18	$54.92	$559
20-99	31.5	1.73	54.64	$54.92	$3,001
100-500	41.5	2.60	107.89	$54.92	$5,925
Over 500	3.0	3.47	10.40	$54.92	$571
Total	87.8	N/A	183.10	N/A	$10,056
Second Year					
1-19	13.5	0.87	11.70	$54.92	$643
20-99	35.8	1.73	62.08	$54.92	$3,410
100-500	42.7	2.60	111.06	$54.92	$6,099
Over 500	3.0	3.47	10.40	$54.92	$571
Total	95.0	N/A	195.24	N/A	$10,723
Third Year					
1-19	15.0	0.87	12.98	$54.92	$713
20-99	39.4	1.73	68.31	$54.92	$3,752
100-500	43.8	2.60	113.94	$54.92	$6,258
Over 500	3.0	3.47	10.40	$54.92	$571
Total	101.2	N/A	205.63	N/A	$11,293

	Annualized Values[6]					
	1-19	14.7	0.87	12.72	$54.92	$698
	20-99	38.7	1.73	67.04	$54.92	$3,682
	100-500	43.6	2.60	113.37	$54.92	$6,226
	Over 500	3.0	3.47	10.40	$54.92	$571
	Total	99.9	N/A	203.52	N/A	$11,177

[1]Source: (PREA Table VII-3, Column 8).
[2](PREA Table IV-39, Column 4) x 52.
[3](Column 2) x (Column 3).
[4]PREA Table IV-39, Column 5.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

Recordkeeping for Monthly Calibration of an AMS

The burden hours and costs of the recordkeeping associated with the monthly calibration of an AMS are shown in Table 8.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-40, MSHA estimates between 1 and 20 hours of burden time per affected mine, depending on mine size. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 753 burden hours and $41,334 in burden costs. Table 8 provides details of these calculations.

Table 8: Section 75.351(o)(1)(iii).
Burden Hours and Costs of Recordkeeping for Monthly Calibration of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	1.00	11.75	$54.92	$645
20-99	31.5	4.00	126.08	$54.92	$6,924
100-500	41.5	12.00	497.94	$54.92	$27,347
Over 500	3.0	20.00	60.00	$54.92	$3,295
Total	87.8	N/A	695.77	N/A	$38,211
Second Year					
1-19	13.5	1.00	13.50	$54.92	$742
20-99	35.8	4.00	143.26	$54.92	$7,868
100-500	42.7	12.00	512.59	$54.92	$28,151

	Over 500	3.0	20.00	60.00	$54.92	$3,295
	Total	95.0	N/A	729.36	N/A	$40,056
	Third Year					
	1-19	15.0	1.00	14.97	$54.92	$822
	20-99	39.4	4.00	157.64	$54.92	$8,658
	100-500	43.8	12.00	525.89	$54.92	$28,882
	Over 500	3.0	20.00	60.00	$54.92	$3,295
	Total	101.2	N/A	758.50	N/A	$41,657
	Annualized Values[6]					
	1-19	14.7	1.00	14.67	$54.92	$806
	20-99	38.7	4.00	154.70	$54.92	$8,496
	100-500	43.6	12.00	523.25	$54.92	$28,737
	Over 500	3.0	20.00	60.00	$54.92	$3,295
	Total	99.9	N/A	752.62	N/A	$41,334
	[1]Source: (PREA Table VII-3, Column 8). [2](PREA Table IV-40, Column 4) x 12. [3](Column 2) x (Column 3). [4]PREA Table IV-40, Column 5. [5](Column 4) x (Column 5). [6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.					

Recordkeeping for Maintenance of an AMS

The burden hours and costs of the recordkeeping associated with the maintenance of an AMS are shown in Table 9.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-41, MSHA estimates between 0.33 and 6.67 hours of burden time per affected mine, depending on mine size. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 251 burden hours and $13,788 in burden costs. Table 9 provides details of these calculations.

	Table 9: Section 75.351(o)(1)(iii).					
	Burden Hours and Costs of Recordkeeping for Maintenance					
	of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air					
	Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
	First Year					

	1-19	11.7	0.33	3.92	$54.92	$215
	20-99	31.5	1.33	42.03	$54.92	$2,308
	100-500	41.5	4.00	165.98	$54.92	$9,116
	Over 500	3.0	6.67	20.00	$54.92	$1,098
	Total	87.8	N/A	231.92	N/A	$12,737
	Second Year					
	1-19	13.5	0.33	4.50	$54.92	$247
	20-99	35.8	1.33	47.75	$54.92	$2,623
	100-500	42.7	4.00	170.86	$54.92	$9,384
	Over 500	3.0	6.67	20.00	$54.92	$1,098
	Total	95.0	N/A	243.12	N/A	$13,352
	Third Year					
	1-19	15.0	0.33	4.99	$54.92	$274
	20-99	39.4	1.33	52.55	$54.92	$2,886
	100-500	43.8	4.00	175.30	$54.92	$9,627
	Over 500	3.0	6.67	20.00	$54.92	$1,098
	Total	101.2	N/A	252.83	N/A	$13,886
	Annualized Values[6]					
	1-19	14.7	0.33	4.89	$54.92	$269
	20-99	38.7	1.33	51.57	$54.92	$2,832
	100-500	43.6	4.00	174.42	$54.92	$9,579
	Over 500	3.0	6.67	20.00	$54.92	$1,098
	Total	99.9	N/A	250.87	N/A	$13,778

[1]Source: (PREA Table VII-3, Column 8).
[2]PREA Table IV-41, Column 8.
[3](Column 2) x (Column 3).
[4]PREA Table IV-41, Column 9.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.351(q) Training of AMS Operators

Section 75.351(q) requires annual training of all AMS operators in the proper operation of the AMS, and that a record be kept of such training. This involves two types of burden hours. First, there is the time spent by the AMS operators in learning. Second, there is the time spent by the AMS trainer in teaching and recordkeeping. These are analyzed separately below.

Learning Time for Training of AMS Operators

The burden hours and costs of the learning time of AMS operators associated with the training of AMS operators are shown in Table 10.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-43, MSHA estimates between 4 and 16 hours of burden time per affected mine, depending on mine size. This time is priced at the miner's wage rate of $28.07 per hour. MSHA estimates annualized values of 939 burden hours and $26,367 in burden costs. Table 10 provides details of these calculations.

Table 10: Section 75.351(q).
Burden Hours and Costs of Learning Time for Training of Operators for an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	4.00	46.99	$28.07	$1,319
20-99	31.5	8.00	252.16	$28.07	$7,078
100-500	41.5	12.00	497.94	$28.07	$13,977
Over 500	3.0	16.00	48.00	$28.07	$1,347
Total	87.8	N/A	845.09	N/A	$23,722
Second Year					
1-19	13.5	4.00	54.01	$28.07	$1,516
20-99	35.8	8.00	286.53	$28.07	$8,043
100-500	42.7	12.00	512.59	$28.07	$14,388
Over 500	3.0	16.00	48.00	$28.07	$1,347
Total	95.0	N/A	901.13	N/A	$25,295
Third Year					
1-19	15.0	4.00	59.89	$28.07	$1,681
20-99	39.4	8.00	315.28	$28.07	$8,850
100-500	43.8	12.00	525.89	$28.07	$14,762
Over 500	3.0	16.00	48.00	$28.07	$1,347
Total	101.2	N/A	949.06	N/A	$26,640
Annualized Values[6]					
1-19	14.7	4.00	58.69	$28.07	$1,647
20-99	38.7	8.00	309.40	$28.07	$8,685
100-500	43.6	12.00	523.25	$28.07	$14,688
Over 500	3.0	16.00	48.00	$28.07	$1,347
Total	99.9	N/A	939.33	N/A	$26,367

[1]Source: (PREA Table VII-3, Column 8).
[2](PREA Table IV-43, Column 2) x (PREA Table IV-43, Column 3).
[3](Column 2) x (Column 3).
[4]PREA Table IV-43, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA

	Chapter VII text for rationale.

Teaching Time and Recordkeeping for Training of AMS Operators

The burden hours and costs of the teaching time and recordkeeping of AMS trainers associated with the training of AMS operators are shown in Table 11.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-43, MSHA estimates 5 hours of burden time per affected mine. This time is priced at the supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 525 burden hours and $28,819 in burden costs. Table 11 provides details of these calculations.

Table 11: Section 75.351(q).
Burden Hours and Costs of Teaching Time and Recordkeeping for Training of Operators for an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	5.25	61.67	$54.92	$3,387
20-99	31.5	5.25	165.48	$54.92	$9,088
100-500	41.5	5.25	217.85	$54.92	$11,964
Over 500	3.0	5.25	15.75	$54.92	$865
Total	87.8	N/A	460.75	N/A	$25,304
Second Year					
1-19	13.5	5.25	70.89	$54.92	$3,893
20-99	35.8	5.25	188.04	$54.92	$10,327
100-500	42.7	5.25	224.26	$54.92	$12,316
Over 500	3.0	5.25	15.75	$54.92	$865
Total	95.0	N/A	498.93	N/A	$27,401
Third Year					
1-19	15.0	5.25	78.60	$54.92	$4,317
20-99	39.4	5.25	206.91	$54.92	$11,363
100-500	43.8	5.25	230.08	$54.92	$12,636
Over 500	3.0	5.25	15.75	$54.92	$865
Total	101.2	N/A	531.34	N/A	$29,181
Annualized Values[6]					
1-19	14.7	5.25	77.02	$54.92	$4,230
20-99	38.7	5.25	203.04	$54.92	$11,151
100-500	43.6	5.25	228.92	$54.92	$12,572
Over 500	3.0	5.25	15.75	$54.92	$865

	Total	99.9	N/A	524.74	N/A	$28,818

[1]Source: (PREA Table VII-3, Column 8).
[2](PREA Table IV-43, Column 5) x (PREA Table IV-43, Columns 6 + 7).
[3] (Column 2) x (Column 3).
[4]PREA Table IV-43, Column 8.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.352(a) and (b) Response Procedures for Alerts, Alarms, and Malfunctions of an AMS

Sections 75.352(a) and (b) require procedures to be followed in response to all alerts, alarms, and malfunction signals of an AMS. These procedures are accompanied by a documentation requirement in §§ 75.351(o)(1)(i) and (ii). The burden hours and costs of these procedures are shown in Table 12.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year.

Based on PREA Table IV-46, MSHA estimates between 4.20 and 34 hours of burden time per affected mine, depending on mine size. This time is priced at the miner's wage rate of $28.07 per hour. MSHA estimates annualized values of 1,536 burden hours and $43,123 in burden costs. Table 12 provides details of these calculations.

Table 12: Sections 75.352(a) & 75.352(b).
Burden Hours and Costs of Response Procedures for Alerts, Alarms, and Malfunctions of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	11.7	4.20	49.34	$28.07	$1,385
20-99	31.5	10.29	324.37	$28.07	$9,105
100-500	41.5	22.38	928.71	$28.07	$26,069
Over 500	3.0	33.58	100.75	$28.07	$2,828
Total	87.8	N/A	1,403.16	N/A	$39,387
Second Year					
1-19	13.5	4.20	56.71	$28.07	$1,592
20-99	35.8	10.29	368.57	$28.07	$10,346
100-500	42.7	22.38	956.03	$28.07	$26,836
Over 500	3.0	33.58	100.75	$28.07	$2,828

	Total	95.0	N/A	1,482.06	N/A	$41,601
	Third Year					
	1-19	15.0	4.20	62.88	$28.07	$1,765
	20-99	39.4	10.29	405.56	$28.07	$11,384
	100-500	43.8	22.38	980.84	$28.07	$27,532
	Over 500	3.0	33.58	100.75	$28.07	$2,828
	Total	101.2	N/A	1,550.03	N/A	$43,509
	Annualized Values[6]					
	1-19	14.7	4.20	61.62	$28.07	$1,730
	20-99	38.7	10.29	397.99	$28.07	$11,171
	100-500	43.6	22.38	975.91	$28.07	$27,394
	Over 500	3.0	33.58	100.75	$28.07	$2,828
	Total	99.9	N/A	1,536.27	N/A	$43,123

[1]Source: (PREA Table VII-3, Column 8).
[2]PREA Table IV-46, Column 8.
[3](Column 2) x (Column 3).
[4]PREA Table IV-46, Column 9.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.371(ll) Initial Reporting of Time Delay or Other Method Used with an AMS

Existing § 75.371(ll) requires reporting (as opposed to justification) within the mine ventilation plan of the "length of the time delay or any other method used for reducing the number of non-fire related alert and alarm signals from carbon monoxide sensors, § 75.351(m)." The burden hours and costs of this initial documenting are shown in Table 13.

MSHA expects that only 40% of diesel mines would use time delays, and no non-diesel mines would use time delays (see PREA Table IV-34). MSHA estimates that 16 mines will be affected in the first year, and a total of 21 mines will be affected in the first three years.

Based on PREA Table IV-34, MSHA estimates 0.25 hour of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 0.8 burden hour and $46 in burden costs. Table 13 provides details of these calculations.

Table 13: Section 75.371(ll).
Burden Hours and Costs of Initial Reporting of Time-Delay or Other Method to Reduce Non-Fire Alerts and Alarms of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	0.3	0.25	0.07	$54.92	$4
20-99	3.2	0.25	0.81	$54.92	$44
100-500	10.9	0.25	2.73	$54.92	$150
Over 500	1.2	0.25	0.30	$54.92	$16
Total	15.6	N/A	3.90	N/A	$214
Second Year					
1-19	0.1	0.25	0.02	$54.92	$1
20-99	1.0	0.25	0.24	$54.92	$13
100-500	1.3	0.25	0.33	$54.92	$18
Over 500	0.1	0.25	0.03	$54.92	$2
Total	2.5	N/A	0.62	N/A	$34
Third Year					
1-19	0.1	0.25	0.02	$54.92	$1
20-99	1.0	0.25	0.24	$54.92	$13
100-500	1.3	0.25	0.33	$54.92	$18
Over 500	0.1	0.25	0.03	$54.92	$2
Total	2.5	N/A	0.62	N/A	$34
Annualized Values[6]					
1-19	0.1	0.25	0.02	$54.92	$1
20-99	1.1	0.25	0.28	$54.92	$15
100-500	2.0	0.25	0.49	$54.92	$27
Over 500	0.2	0.25	0.05	$54.92	$2
Total	3.3	N/A	0.84	N/A	$45

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-34, Column 6) x (PREA Table IV-34, Column 7).
[2]PREA Table IV-34, Column 3.
[3](Column 2) x (Column 3).
[4]PREA Table IV-34, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.371(mm) Initial Reporting of Reduced CO Alert and Alarm Levels of an AMS

Section 75.371(mm) requires reporting (as opposed to justification) within the mine ventilation plan of the "lower alert and alarm settings for carbon monoxide sensors, § 75.351(m)." The burden hours and costs of this initial documenting are shown in Table 14.

Only 5% of mines are expected to reduce alert and alarm levels (see PREA Table IV-47). MSHA estimates that 4 mines will be affected in the first year, and a total of 6 mines will be affected in the first three years.

Based on PREA Table IV-47, MSHA estimates 0.25 hour of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 0.29 burden hour and $16 in burden costs. Table 14 provides details of these calculations.

Table 14: Section 75.371(mm).
Burden Hours and Costs of Initial Reporting of Reduced Alert and Alarm Levels for the Carbon Monoxide Sensors of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	0.6	0.25	0.15	$54.92	$8
20-99	1.6	0.25	0.39	$54.92	$22
100-500	2.1	0.25	0.52	$54.92	$28
Over 500	0.2	0.25	0.04	$54.92	$2
Total	4.4	N/A	1.10	N/A	$60
Second Year					
1-19	0.2	0.25	0.05	$54.92	$3
20-99	0.5	0.25	0.12	$54.92	$6
100-500	0.3	0.25	0.06	$54.92	$3
Over 500	0.0	0.25	0.00	$54.92	$0
Total	0.9	N/A	0.23	N/A	$13
Third Year					
1-19	0.2	0.25	0.05	$54.92	$3
20-99	0.5	0.25	0.12	$54.92	$6
100-500	0.3	0.25	0.06	$54.92	$3
Over 500	0.0	0.25	0.00	$54.92	$0
Total	0.9	N/A	0.23	N/A	$13
Annualized Values[6]					
1-19	0.2	0.25	0.05	$54.92	$3
20-99	0.5	0.25	0.14	$54.92	$7
100-500	0.4	0.25	0.09	$54.92	$5
Over 500	0.0	0.25	0.01	$54.92	$0
Total	1.1	N/A	0.29	N/A	$16

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-47, Column 6).
[2]PREA Table IV-47, Column 3.
[3](Column 2) x (Column 3).

[4]PREA Table IV-47, Column 4.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

§ 75.371(nn) Initial Reporting of Emergency Instruments for AMS Failure

Section 75.371(nn) requires reporting within the mine ventilation plan of the "alternate instrument and the alert and alarm levels associated with the instrument, § 75.352(d)(7)." The burden hours and costs of this initial documenting are shown in Table 15.

Only 10% of mines are expected to use smoke detectors that require substitute hand-held instruments for emergency use (see PREA Table IV-48). MSHA estimates that 9 mines will be affected in the first year, and a total of 12 mines will be affected in the first three years.

Based on PREA Table IV-48, MSHA estimates 0.25 hour of burden time per affected mine, at a supervisor's wage rate of $54.92 per hour. MSHA estimates annualized values of 0.6 burden hour and $32 in burden costs. Table 15 provides details of these calculations.

Table 15: Section 75.371(nn).
Burden Hours and Costs of Initial Reporting of Emergency Instruments for Use in the Event of Failure of an Atmospheric Monitoring System (AMS) for Mines Using Belt Air

Number of Employees	Number of Affected Operations[1]	Burden Hours Per Mine[2]	Total Annual Burden Hours[3]	Wage Rate[4]	Annual Burden Costs[5]
First Year					
1-19	1.2	0.25	0.29	$54.92	$16
20-99	3.2	0.25	0.79	$54.92	$43
100-500	4.1	0.25	1.04	$54.92	$57
Over 500	0.3	0.25	0.08	$54.92	$4
Total	8.8	N/A	2.19	N/A	$120
Second Year					
1-19	0.4	0.25	0.09	$54.92	$5
20-99	0.9	0.25	0.24	$54.92	$13
100-500	0.5	0.25	0.13	$54.92	$7
Over 500	0.0	0.25	0.01	$54.92	$0
Total	1.8	N/A	0.46	N/A	$25
Third Year					
1-19	0.4	0.25	0.09	$54.92	$5
20-99	0.9	0.25	0.24	$54.92	$13
100-500	0.5	0.25	0.13	$54.92	$7

	Over 500	0.0	0.25	0.01	$54.92	$0
	Total	1.8	N/A	0.46	N/A	$25
	Annualized Values[6]					
	1-19	0.4	0.25	0.11	$54.92	$6
	20-99	1.1	0.25	0.27	$54.92	$15
	100-500	0.7	0.25	0.19	$54.92	$10
	Over 500	0.0	0.25	0.01	$54.92	$1
	Total	2.3	N/A	0.57	N/A	$32

[1]Source: (PREA Table VII-4, Column 4) x (PREA Table IV-48, Column 5).
[2]PREA Table IV-48, Column 2.
[3](Column 2) x (Column 3).
[4]PREA Table IV-48, Column 3.
[5](Column 4) x (Column 5).
[6]Values are annualized according to the formula: (Annualized Value) = (First Year Value) x (0.07 / 1.07) + (Second Year Value) x (0.07 / 1.07^2) + (Third Year Value) x (0.07 / 0.0749). See PREA Chapter VII text for rationale.

First Year Total Burden Hours = 18,607
First Year Total Burden Hour Cost = $992,296

Section	Responses	Burden Hours	Avg time per Response	Burden Costs
75.351(j)	44	351	7.98 hrs	$5,046
75.351(j) on 75.371(hh)	44	11	.25 hrs	$158
75.351(m)	16	125	7.81 hrs	$1,470
75.351(n)(2)	88	2,747	31.22 hrs	$167,661
75.351(n)93)	88	10,436	118.59 hrs	$620,005
75.351(o)(1)(i) & 75.351(o)(1)(ii)	88	1,110	12.61 hrs	$33,266
75.351(o)(1)(iii) weekly	88	183	2.08 hrs	$11,177
75.351(o)(1)(iii) monthly	88	696	7.91 hrs	$41,334
75.351(o)(1)(iii) maintenance	88	232	2.64 hrs	$13,778
75.351(q) learning	88	845	9.60 hrs	$26,367
75.351(q) teaching /recording	88	461	5.24 hrs	$28,818
75.351(a) & 75.352(b)	88	1,403	15.94 hrs	$43,123
75.371(ll)	16	4	.25 hrs	$45
75.371(mm)	4	1	.25 hrs	$16
75.371(nn)	9	2	.22 hrs	$32
Total	925	18,607		$992,296

Note: The PREA total hours and annualized costs contain the implied impact that the rule will have on §§ 44.9, 44.10, & 44.11, (Approved OMB pkg. 1219-0065). Although there is no new or revised paperwork requirements, 1219-0065 will realize a reduction of 354 hours and $19,461. Upon publication of the final rule an 83-C will be submitted.

The PREA total hours and annualized costs contain the implied impact that the rule will have on §75.363(b), (Approved OMB pkg. 1219-0088). Although there is no new or revised paperwork requirements, 1219-0088 will realize an increase of 15 hours and $478. Upon publication of the final rule an 83-C will be submitted.

Hours:18,607 – 354 + 15 = 18,268 Annualized Costs:$992,296 - $19,461 + $478 = $973,313

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 13 and 15.)

- **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

Capital and Start-up costs = NA

Operation and maintenance:

§ 75.351(1)(iii)(3). Record security of tests, calibrations, and maintenance.

Section 75.351(l)(1)(iii)(3) requires safekeeping of records for one year of all alerts, alarms, malfunctions, maintenance, examination, testing, and calibration for an AMS. MSHA estimates that 88 mines will be affected in the first year. Based on PREA Table IV-42, MSHA estimates between $2.25 and $46 of materials cost per affected mine, depending on mine size.

Mines (1-19)	11 x 2.25 =	25
Mines (20-99)	32 x 8.02 =	257
Mines (100-500)	42 x 25.00 =	1,050
Mines (>500)	3 x 46.04 =	138
		$1,470

§ 75.351(n)(3) Monthly Calibration of an AMS

Section 75.351(n)(3)(i) requires monthly calibration of the CO sensors for an AMS. This monthly calibration is accompanied by a documentation requirement in § 75.351(o)(1)(iii). The material costs of this monthly calibration are below.

Based on PREA Table IV-37, an AMS for a belt-air mine is assumed to have between 5 and 100 sensors, depending on mine size. A single calibration of twenty sensors requires the consumption of one bottle of calibration gases, at a cost of $80 per bottle. Hence, one sensor calibration has a material cost of $4. Performing twelve monthly calibrations on a single sensor yields an annual material cost of $48 per sensor. Accordingly, MSHA estimates between $240 and $4,800 in annual material costs per mine for calibration, depending on mine size.

MSHA estimates that 88 mines will be affected in the first year, 95 mines in the second year, and 101 mines in the third year. MSHA estimates annualized values of $180,628 in material costs. Table 26 provides details of these calculations.

Mines (1-19)	11 x 5 x $48 =	$ 2,640
Mines (20 – 99)	32 x 20 x $48 =	$ 30,720
Mines (100 – 500)	42 x 60 x $48 =	$120,960
Mines (>500)	3 x 100 x $48 =	$ 14 400
		$168,720

TOTAL COST BURDEN = $170,190

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

There is no cost to the Federal Government.

15. Explain the reason for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-1.

It would be necessary to have such requirements to protect miners against fire and explosion hazards associated with the physical conditions found in underground mines, as well as, the hazards associated with underground mining equipment.

Respondesnts: There has been an increase of 88 respondents (0 to 88). This proposed rule applies to underground coal mines. It is expected that the number of existing and new mines using Belt Air in the First year will be 88.

Responses: There has been an increase of 925 responses (0 to 925). Based on MSHA's estimates in the PREA, we anticipate there would be 925 responses in the first year of this rule.

Hours: There has been an increase of 18,607 hours (0 to 18,607). Based on the PREA, we anticipated that each task performed under the rule would take an estimated amount of time. This cumulative first year time totals to 18,607 hours.

Costs: there has been an increase of 170K ($0 - $170). Although MSHA does not expect capital start-up costs, we do anticipate operation and maintenance costs with respect to this rule. Based on our research, we anticipate that the first year of the rule will yield $170K in costs.

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

MSHA does not intend to publish the results of this information collection.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

MSHA has no forms associated with this collection of information on which to display an expiration date.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.

There are no certification exceptions identified with this proposed information collection.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When Item 17 on the Form OMB 83-I is checked "Yes", the following documentation should be included in the Supporting Statement to the extent that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

2. Describe the procedures for the collection of information including:

. Statistical methodology for stratification and sample selection,

. Estimation procedure,

. Degree of accuracy needed for the purpose described in the justification,

. Unusual problems requiring specialized sampling procedures, and

. Any use of periodic (less frequent than annual) data collection cycles to reduce burden.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test

or set of tests may be submitted for approval separately or in combination with the main collection of information.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other persons(s) who will actually collect and/or analyze the information for the agency.

The collection of this information does not employ statistical methods.